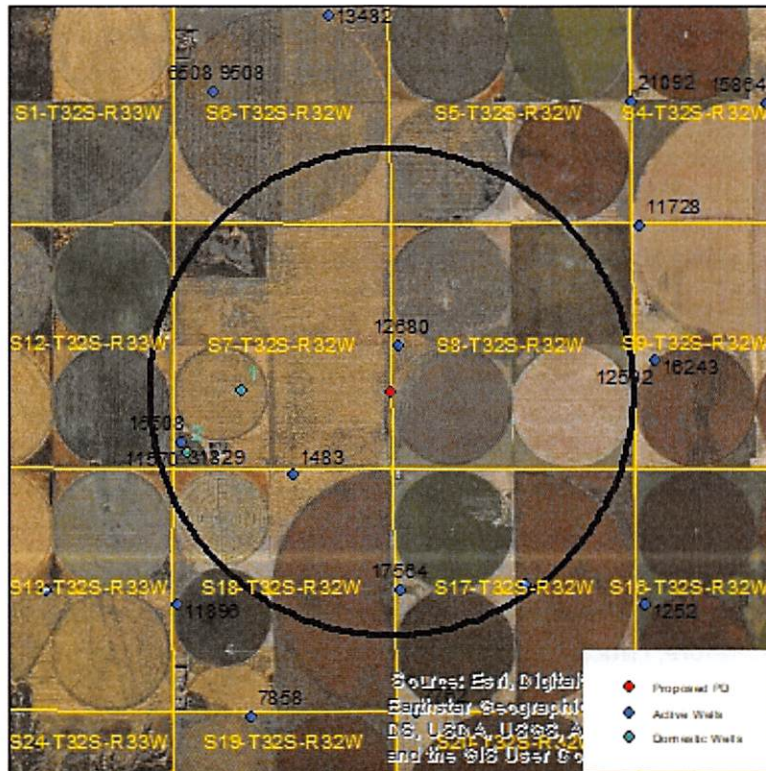


## Evaluation of proposed move for Water Right No 12680

Proposed: Move water right no. 12680 a distance of 1005 ft to the south.



Wells within 1 mile: 11570 & 16508 & 31829, 1483, 17564, 12679, and 2 domestic wells, numbered on the above map.

The saturated thickness at the proposed well location is estimated to be 223 ft, based upon the driller's log and an observation well in section 19-32-32. For saturated thickness greater than 200 ft, the drawdown allowance is 4.0 ft.

**50 year Theis Analysis:** The following values were used to run the analysis:

$S = 0.2733$ ,  $T = 19,027 \text{ ft}^2/\text{day}$ ,  $tp_{\text{current}} = 221 \text{ days}$  (based upon average use and observed rate),  
 $Q_{\text{current}} = 439 \text{ gpm}$  (based upon 2017 field inspection),  $tp_{\text{proposed}} = 105 \text{ days}$ ,  $Q_{\text{proposed}} = 1385 \text{ gpm}$

Theis drawdowns were calculated as follows:

11570 & 16508 & 31829: Drawdown from current location = 1.06 ft

Drawdown from proposed location = 1.76 ft

Net drawdown = **0.7 ft**

1483:

Drawdown from current location = 1.27 ft

Drawdown from proposed location = 2.49 ft

Net drawdown = **1.2 ft**

17564: Drawdown from current location = 1.04 ft  
Drawdown from proposed location = 1.85 ft  
Net drawdown = **0.8 ft**

12679: Drawdown from current location = 0.99 ft  
Drawdown from proposed location = 1.66 ft  
Net drawdown = **0.7 ft**

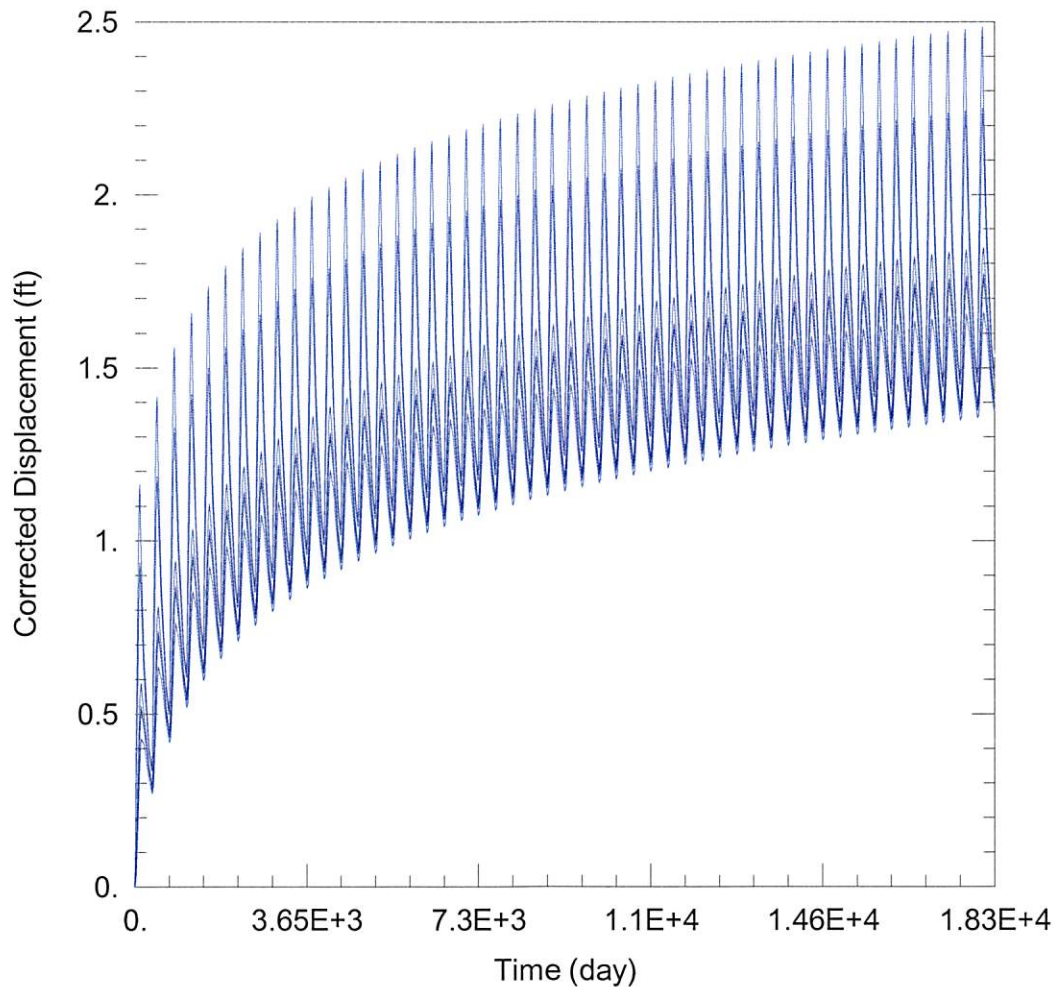
Domestic 1: Drawdown from current location = 1.28 ft  
Drawdown from proposed location = 2.25 ft  
Net drawdown = **1.0 ft**

Domestic 2: Drawdown from current location = 1.06 ft  
Drawdown from proposed location = 1.77 ft  
Net drawdown = **0.7 ft**

Net drawdown does not exceed the drawdown allowance of 4.0 ft for any wells within 1 mile of the proposed location. Therefore, critical well analysis is not necessary.

**Conclusion:**

Based upon information from the GMD3 model, this proposal will cause minimal effects on neighboring wells, and is unlikely to create an impairment. GMD3 staff recommends approval of the application.



### WELL TEST ANALYSIS

Data Set: C:\Users\trevora\Documents\2020\_moves\12680\12680 Proposed.aqt

Date: 03/02/20

Time: 13:58:27

### PROJECT INFORMATION

Company: GMD 3

Project: 12680

Location: Seward County

Test Well: 12680

### WELL DATA

#### Pumping Wells

Well Name	X (ft)	Y (ft)
12680	-10171	146076

#### Observation Wells

Well Name	X (ft)	Y (ft)
□	-10171	146076
□ 11570 & 31829 & 16508	-14734	144963
□ 1483	-12296	144263
□ 17564	-9940	141753
□ 12679	-7224	141884
□ Domestic 1	-13427	146087
□ Domestic 2	-14621	144765

### SOLUTION

Aquifer Model: Unconfined

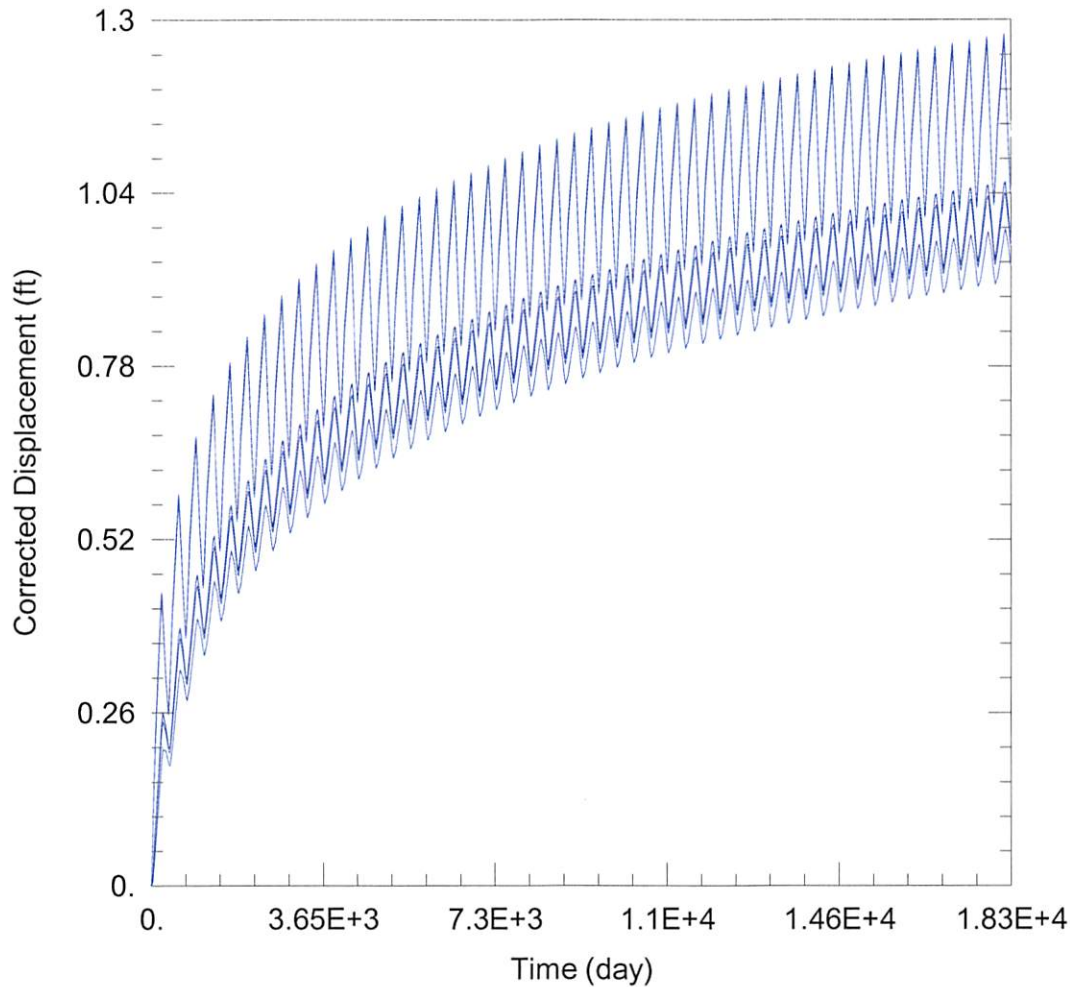
Solution Method: Theis

T = 1.903E+4 ft<sup>2</sup>/day

S = 0.2733

Kz/Kr = 1.

b = 223. ft



### WELL TEST ANALYSIS

Data Set: C:\Users\trevora\Documents\2020\_moves\12680\12680 Current.aqt

Date: 03/02/20

Time: 13:58:33

### PROJECT INFORMATION

Company: GMD 3

Project: 12680

Location: Seward County

Test Well: 12680

### WELL DATA

#### Pumping Wells

Well Name	X (ft)	Y (ft)
12680	-10022	147070

#### Observation Wells

Well Name	X (ft)	Y (ft)
□	-10022	147070
□ <u>11570 &amp; 31829 &amp; 16508</u>	-14734	144963
□ <u>1483</u>	-12296	144263
□ <u>17564</u>	-9940	141753
□ <u>12679</u>	-7224	141884
□ <u>Domestic 1</u>	-13427	146087
□ <u>Domestic 2</u>	-14621	144765

### SOLUTION

Aquifer Model: Unconfined

Solution Method: Theis

T = 1.903E+4 ft<sup>2</sup>/day

S = 0.2733

Kz/Kr = 1.

b = 223. ft